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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/643,519	08/19/2003	Paul D. Lord	2001-IP-004018UID1	4462

7590

12/23/2004

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EXAMINER

TUCKER, PHILIP C

ART UNIT	PAPER NUMBER
1712	

DATE MAILED: 12/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/643,519	<b>Applicant(s)</b> LORD ET AL.	
	<b>Examiner</b> Philip C Tucker	<b>Art Unit</b> 1712	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.  
     4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 10-22 is/are allowed.
- 6) ☒ Claim(s) 1-4, 8 and 9 is/are rejected.
- 7) ☒ Claim(s) 5-7 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |                                                                                                                                   |                                                                                         |
|-----------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                              | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.                                                |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-4 and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Anderson et al (4635727).

Anderson teaches a method of fracturing a subterranean formation utilizing a fluid which comprises a concentration of guar polymer within the scope of the present invention (see column 4, lines 1-36). The aqueous liquid used may be seawater (column 3, lines 58-60). The pH of the fluid is below 9.5, and the cross-linking may be delayed for several minutes to an hour or more (column 5, lines 17-27). Proppant may be employed as in claim 8 (column 5, lines 34-42). Although a specific use at greater than 200 degrees F is not specifically taught, such intended use does not distinguish over the prior art (In re Pearson 181 USPQ 641). Furthermore, such high temperatures would typically be found during fracturing subterranean formations.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

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the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson (4635727) optionally in view of Conway (4462917).

Anderson teaches a method of fracturing a subterranean formation utilizing a fluid which comprises a concentration of guar polymer within the scope of the present invention (see column 4, lines 1-36). The aqueous liquid used may be seawater (column 3, lines 58-60). The pH of the fluid is below 9.5, and the cross-linking may be delayed for several minutes to an hour or more (column 5, lines 17-27). Although a specific use at greater than 200 degrees F is not specifically taught, such intended use does not distinguish over the prior art (In re Pearson 181 USPQ 641). Furthermore, such high temperatures would typically be found during fracturing subterranean formations. Anderson differs from the present invention in that the use of specific breakers such as oxidizing agents, enzymes and acids is not disclosed. Anderson however teaches that breakers may be used to convert the gelled fluid to a low viscosity fluid (column 6, lines 3-6). It would be obvious to one of ordinary skill in the art to utilize well known breakers in the art of fracturing, such as oxidizers, enzymes or acids in the fracturing fluid of Anderson, given the teaching of Anderson that such breakers may be used to convert the gelled fluid to a low viscosity fluid. Conway teaches that gelled fracturing fluids may be converted to low viscosity fluids by the use of oxidizing or enzyme breakers (column 6, lines 33-55). It would be obvious to one of ordinary skill in the art to utilize the breakers of Conway in the fluid of Anderson, in order to convert the

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gelled fluid of Anderson to a low viscosity fluid, given the teaching of Anderson that such breakers are useful in the fracturing fluid.

5. Claims 5-7 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. Claims 10-22 are allowable over the art of record.

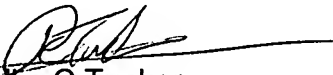
7. The following is a statement of reasons for the indication of allowable subject matter: The prior art fails to teach the use of the titanium compounds, as specified in claims 5-7 and 10-22 as delayed cross-linking agents in the seawater containing gels. Conway (4462917) teaches the formation of gels using a delayed titanium cross-linker, but fails to specify the use of seawater as in the present claim 1.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Philip C Tucker whose telephone number is 571-272-1095. The examiner can normally be reached on Monday - Friday, Flexible schedule.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on 571-272-1302. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Philip C Tucker  
Primary Examiner  
Art Unit 1712

PCT-3223